

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of increasing the efficiency of a luminescent material having current carriers with a spin flip rate, an emissive singlet recombination channel, and a non-emissive triplet recombination channel, and wherein the singlet recombination cross section is greater than the triplet recombination cross section, the method comprising:

processing the luminescent material so as to increase the spin flip rate of the current carriers; said step of processing comprising adding a magnetically active impurity to said luminescent material.

2. (Canceled)

3. (Withdrawn) The method of claim 1, wherein the processing includes a magnetic field.

4. (Withdrawn) The method of claim 1, wherein the processing includes an increase in effective spin temperature.

5. (Original) The method of claim 1, wherein the material is a polymer.

6. (Withdrawn) The method of claim 1, wherein the material is an oligomer.

7. (Withdrawn) The method of claim 1, wherein the material is a molecular crystal.

8. (Withdrawn) The method of claim 1, wherein the material is a fullerene.
9. (Canceled)
10. (Currently Amended) The method of claim 1, wherein the magnetically active impurity is a paramagnetic material.
11. (Original) The method of claim 1, wherein the impurity facilitates low-frequency vibrations.
12. (Withdrawn) A light-emitting device incorporating the material of claim 1.
13. (Currently Amended) A method of improving the efficiency of an organic light-emitting material having carriers which exhibit a spin-lattice relaxation rate, an emissive singlet recombination channel, and a non-emissive triplet recombination channel, and wherein the singlet recombination cross section is greater than the triplet recombination cross section, the method comprising:

adding an impurity to the material so as to increase the spin-lattice relaxation rate of the carriers.
14. (Original) The method of claim 13, wherein the material is a polymer.
15. (Withdrawn) The method of claim 13, wherein the material is an oligomer.

16. (Withdrawn) The method of claim 13, wherein the material is a molecular crystal.

17. (Withdrawn) The method of claim 13, wherein the material is a fullerene.

18. (Original) The method of claim 13, wherein the impurity is magnetically active.

19. (Currently Amended) The method of claim ~~13~~ 18, wherein the impurity is a paramagnetic material.

20. (Original) The method of claim 13, wherein the impurity facilitates low-frequency vibrations.

21. (Withdrawn) A light-emitting device incorporating the material of claim 13.

22. (Withdrawn) An material for use in a high-efficiency light-emitting device, the material comprising:

an electro-luminescent compound in which useful light emission occurs only through the recombination of singlet excitons; and

an impurity, added so as to increase the spin flip rate of carriers propagating through the material.

23. (Withdrawn) An electro-luminescent device, comprising:
a first electrode;
an electro-luminescent layer supporting the flow of current carriers having a spin-flip rate;
a second electrode; and
an organic electro-luminescent material and an impurity added to the electro-luminescent layer so as to increase the spin flip rate of the current carriers.

24. (Withdrawn) A laser, comprising:
a light-emissive layer from which light is emitted through the injection of current carriers having a spin-flip rate;
an optical resonator;
an organic electro-luminescent material and an impurity added to the light-emissive layer so as to increase the spin flip rate of the current carriers.

25. (New) The method of claim 1, wherein said magnetically active material is a ferromagnetic material.

26. (New) The method of claim 18, wherein the magnetically active impurity is a ferromagnetic material.